

ASSESSING TRAINING NEEDS OF FARMERS IN PAKISTAN: A CASE OF FARMER FIELD SCHOOLS (FRUIT AND VEGETABLE PROJECT) IN TEHSIL RAWALPINDI

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Pakistan is an agriculture based country and majority of the Pakistani population, directly or indirectly, depends on agriculture for subsistence. Government of Pakistan has started various approaches to train farming community of the country. Many approaches have been used for this purpose but none proved fruitful as expected. Therefore, for the purpose of building capacity of farmers, the government of Pakistan started Farmer Field School (FFS) approach after viewing its success across the globe. The aim of FFS is to promote and expand the knowledge of best practices in agriculture through human capacity building. This research focuses human and social gains in addition to the environmental benefits associated with attending IPM through it. Training and capacity enhancement of farming community in fruit and vegetable production is done on modern lines through this approach. The school is used for training of farming community with modern marketing techniques for higher rate of returns for their products across the globe. The sample was taken from the farmers who were in collaboration with such schools. Simple random sampling method was used and the total sample size was comprised of total 120 respondents. The results were analyzed by Statistical Package for Social Sciences.

Keywords: Training need analysis, Need Assessment, FFS, F & V, Rawalpindi

INTRODUCTION

The agricultural sector is one of the largest sectors of Pakistan's economy, having the share of about 23.1% of the Gross Domestic Product (GDP) and provides employment to 45% of the total workforce of the country. More than 70% of Pakistani population directly or indirectly depends on agriculture for their existence. Agriculture sector of the country occupies a prime position in its economy (Govt. of Pak., 2010) by providing different employment opportunities Riasat *et al.*, (2014).

Nature has endowed Pakistan with wide range of agro-climatic conditions which permit the production of varieties of tropical as well as temperate fruits. Ahmed *et al.*, (1993 a) calculated the cost of production of fruit plants and major crops whereas some other estimated about the chemical composition, shelf life of vegetable crop Shakeel *et al.*, (2014) and related issues as screening of anti-microbial resistant bacteria (Javed & Mahmood, 2016). It is reported by Ahmed *et al.*, (1993 a) that cultivation of fruits resulted in more income per hectare than major crops. In the year 2007-08 area under all fruits in the Punjab was 400.9 thousand hectares with an annual production of 4562.2 thousand tones. Area in Pakistan under all fruits was 853.4 thousand hectares with an annual production of 7178.8 thousand tones. Area under

mango fruit in the Punjab was 112.3 thousand hectares with an annual production of 1753.7 thousand tones whereas area under mango fruit in Pakistan was 166.2 thousand hectares with an annual production of 1373.1 thousand tones.

Fruit & Vegetable Development Project was launched by Government of the Punjab, Agriculture Extension Department as a pilot project in 10 districts from July 2005 to June 2010 and after few years seeing its success, the project was extended to 2013. The main objective of this project is to enhance the quality production of fruits and vegetables with value addition for sustainable supply from farm to fork with ultimate goal to increase the farmer's profitability and alleviation of poverty by educating farming community through well-defined approach of FFS. It is possible to alleviate poverty and improve living standards of the farming community through diversification of high value fruit and vegetable crops production (Masud, 2007). Capacity enhancement of farming community in fruit and vegetable production is on modern lines through FFS approach. Training of farming community for production of off-season vegetables through tunnel technology and usage of hybrid seeds in open field vegetable production. Minimizing the use of pesticides through integrated pest management. Popularization of biological control of fruit fly in mango and citrus orchards. Reduction in post-harvest losses is noted

through the use of improved harvesting techniques. Training of farming community with modern marketing techniques is for higher rate of return for their production. Development of linkages with exporters, processors and marketing chains is necessary. Promotion of grapes and peach cultivation in Potohar area by establishing demonstration plots. Establishment of Germ Plasm Units (GPU) of mango, citrus and peach for provision of certified fruit plants to registered nursery growers. There should be motivation of private nursery owners for registration with Federal Seed Certification and Registration Department (FSC&RD) as according to the recommendation of Ahmed *et al.*, (1993 b). Low yield of fruits & vegetable was evident because there exists lack of technical knowledge/training among the farmers (Iftikhar, 2009). There lies a silver lining in the process that farmers are unaware of the importance of this technical knowledge and training. One of the reasons of poor adoption/acceptance was the low level of knowledge and skill of farmers in growing and managing fruit plants/gardens. The need for capital availability and financing for their business related to cultivation of crops and rearing of animal has already been recognized (Memon, 1989). Due to capital unavailability, these farmers have not been able to get good returns for their production. Inaccessibility to upcoming technology and innovation for the farmers is another reason. Farmers would not adopt any innovation, if they are residing in marginal areas and do not have an easy access to technology (Kadian, 1999). Hence, this study was conducted to assess the training needs of farmers through F & V (Fruit and Vegetable development project) in tehsil Rawalpindi.

MATERIALS AND METHODS

Rawalpindi district is considered as the population of the study. Rawalpindi is one of the important districts of the Punjab Province, Pakistan. The total area of the district is 5286 square km. It consists of seven tehsils namely Gujar Khan, Kahuta, Kotli Sattian, Kallar Syedan, Murree, Rawalpindi Town and Taxila. The data were collected from FFS, Fruit and Vegetable Development project (F&V). Six out of twelve (12) FFS dealing with F&V project were randomly selected for data collection. A sample of 120 farmers, who were in collaboration with FFS under Government F&V project, was taken to collect the data. Quantitative assessments were done by using open ended and close ended questions. Questions were prepared in English but were asked in the local language for proper understanding of the respondents. Results were analyzed through Statistical Package for Social Sciences (SPSS).

RESULTS AND DISCUSSION

The data were collected from both male and female farmers. The results are shown in Table 1.

Table 1: Distribution of the respondents regarding their gender.

Gender	Frequency	%
Male	93	77.50
Female	27	22.50
Total	120	100.00

Table 1 shows that a majority (77.5%) of the respondents were male and about quarter (22.5%) were female. Below given Table 2 reveals that less than fifty (43.3%) of the respondents demanded that they need training regarding wheat from FFS, 28.3% of the respondents demanded that they need more trainings regarding tomato from the school. Some (9.2%) of the respondents demanded that they want to get onion production training from the training center. Few (4.2%) of the respondents demanded that they need trainings regarding pulses, 2.5% of the respondents demanded that they need tunnel farming trainings. Very few 1.7% of the respondents demanded that they need kitchen gardening and groundnut training, and 0.8% of the respondents demanded that they need trainings regarding corn, cucumber, lady finger, potato, garlic, cold storage, mango, maize and chilies.

Table 2: Distribution of the respondents regarding their training need from FFS

Trainings	Frequency	%
Tomato	34	28.33
Wheat	52	43.33
Corn	01	0.84
Pulses	05	4.17
Cucumber	01	0.84
Chillies	01	0.84
Kitchen gardening	02	1.67
Tunnel farming	03	2.50
Maize	01	0.84
Fruit and vegetables	02	1.67
Lady finger	01	0.84
Mango	01	0.84
Groundnut	02	1.67
Cold storage	01	0.84
Garlic	01	0.84
Potato	01	0.84
Onion	11	9.16
Total	120	100.00

Farmers were asked regarding their participation in FFS activities and the responses are displayed in Table 3 given below. It indicates that an overwhelming majority (83.33-97.50%) of the respondents reported their participation in various FFS activities like purposeful play, special topic/hot issues discussion, preparation of recommended charts, insect's identification, analysis of agro-ecological system and

Table 3: Distribution of the respondents regarding their participation in FFS activities

FFS activities	Yes		No		Total	
	F	%	F	%	F	%
Agro-Ecological System Analysis (AESAs)	114	95.00	06	0.50	120	100.00
Special topic/ hot issues discussion	112	93.33	08	6.70	120	100.00
Preparation of recommended chart	113	93.33	07	5.67	120	100.00
Purposeful play	106	88.33	14	11.70	120	100.00
Insect identification	113	93.33	07	5.67	120	100.00
Disease diagnosis	117	97.50	03	2.50	120	100.00

disease diagnosis. Furthermore, 11.70% respondents agreed they didn't actively participate in purposeful play, 6.70% respondents replied that they didn't actively took part in special topic/hot issues discussion, 5.67% respondents stated that they did not actively participated in insects identification and preparation of recommendation chart, 5.00% respondents claimed not to actively participate in agro-ecological system analysis and only 2.50% respondents showed no interest in participation in disease diagnosis.

The data presented in Table 4 highlights that slightly less than fifty (47.5%) of the respondents replied that flip charts were used in FFS trainings. Around 1/3rd (35%) of the respondents reported that pamphlets were used by the extension staff during FFS meetings and only 17.5% recognized that posters were used during FFS meetings.

Table 4: Distribution of the respondents regarding extension tools used during FFS trainings

Tools	Frequency	%
Posters	21	17.50
Flip charts	57	47.50
Pamphlets	42	35.00
Total	120	100.00

Conclusions: Training regarding the cultivation of fruits and vegetables is not the main demand of the respondents. Majority of the respondents were male and were not interested in related trainings. Although the farmers participated in various activities like purposeful play, special topic/hot issues discussion, preparation of recommended charts, insects' identification, analysis of agro-ecological system and disease diagnosis but they did not consider these useful. Those (less than 30%) who were interested in F&V trainings indicated their need of trainings about tomato cultivation. It is recommended that FFS staff must provide training regarding crops along with the fruits and vegetables to properly convince the non-adopting farmers. There is also a need to start the trainings regarding cold storage practices so that the farmers store their product for long time.

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